ZooKeys 425: 51–57 (2014)
doi: 10.3897/zookeys.425.7454
www.zookeys.org

RESEARCH ARTICLE

A peer-reviewed open-access journal
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A new species of *Dendrocerus* (Hymenoptera, Megaspilidae) from southern Brazil

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Academic editor: *M. Engel* | Received 7 March 2014 | Accepted 27 May 2014 | Published 10 June 2014

http://zoobank.org/BCA69D5C-BBED-474C-8A0D-A3E0B41070F8

Citation: Pezzini C, Zilch KCF, Köhler A (2014) A new species of *Dendrocerus* (Hymenoptera, Megaspilidae) from southern Brazil. ZooKeys 425: 51–57. doi: 10.3897/zookeys.425.7454

Abstract

A new species of the megaspiline genus *Dendrocerus* Ratzeburg is described and figured. *Dendrocerus riograndensis* **sp. n.**, is known from a series of males from the central region of Rio Grande do Sul, Brazil, and were captured with Malaise traps from an agricultural tobacco field.

Keywords

Ceraphronoidea, systematic, new species

Introduction

The parasitoid wasp family Megaspilidae includes more than 450 species in 11 genera worldwide (Dessart 2006), but the fauna of South America remains little known. Johnson and Musetti (2004) noted the genus *Dendrocerus* Ratzeburg to be cosmopolitan, with 96 described species, but only 11 of them are recorded from the Neotropical Region. Four species of *Dendrocerus* are known from Brazil: *Dendrocerus sylviae*

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Dessart, collected in Pará State, *D. carpenteri* (Curtis), collected in many regions of Brazil, *D. aphidum* (Rondani), recordered in Rio Grande do Sul State and *D. phallocrates* Dessart, collected in São Paulo State (Dessart and Cancemi 1986; Dessart 1987; Tavares 1996; Dessart 1996; Martinez 2003).

Among species in *Dendrocerus* males of the *halidayi* species group are characterized by their flabellate antennae, with long branches on the proximal 4, 5, or 6 flagellomeres. There are 21 species of this group distributed on all continents except Antarctica, with the following four species from the New World tropics: *D. araucanus* Dessart (Chile), *D. mexicali* Dessart (Mexico), *D. sylviae* Dessart (Brazil) and *D. ranquel* Martinez (Argentina) (Dessart 1999; Martinez 2003). The objective of this paper is to describe a new species of *Dendrocerus* belonging to the *halidayi* group.

Material and methods

Specimens were collected with a Malaise trap in an organically managed cultivation of tobacco (*Nicotinana tabacum* L.) during the 2011–2012 crop, in Santa Cruz do Sul, Rio Grande do Sul, Brazil. The material was studied using a stereoscopic microscope trinocular Motic Quimis Q764ZT and is deposited in the Coleção Entomológica de Santa Cruz (CESC).

The morphological nomenclature, format for the description, and measurements employed follow that of Dessart (1999), while Martinez (2003) is followed for features of the flagellomeres and side branches. The relative measures, except the entire body length, are expressed in millimeters.

Results

Dendrocerus riograndensis Pezzini & Köhler, sp. n.

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Etymology. The specific epithet is based on the state of Rio Grande do Sul from where the type series was captured.

Diagnosis. Male head moderately transverse; antenna with five rami on first to fifth flagellomeres (antennomeres three through seven), not articulated, remaining flagellomeres without rami. Mesoscutellum without grooves or lateral carina; propodeum without armature. Metasoma smooth and shining, without punctures.

Description. Male: Total body length 1.32 mm, forewing length 0.85 mm. Coloration: Brownish throughout; Metasoma, mouthparts, and legs light brown; trochanters, femoral apices, tarsi, and tibial bases lighter. Wings hyaline with brown venation.

Head: Coriaceous, pubescent; moderately transverse. Ocelli forming an isosceles triangle with wider base, median ocellus bordered anteriorly by an obvious depres-

sion; preoccipital depression bounded by only a groove posterior to lateral ocelli and separated by a distance shorter than diameter; preoccipital suture visible until base of ocellar triangle. Compound eyes subcircular, pubescent, setae distinctly shorter than those on remainder of head. Supraclypeal depression conspicuous, with adjacent areas glabrous; intertorular carina present. Antenna flabellate, with coarse bristles (Fig. 6), with elongate rami laterally on proximal five flagellomeres (flagellomeres I–V, or antennomeres III–VII), A8–11 cylindrical and without lateral rami; scape: 18 (5); pedicel: 1 (1); A_3: 2, R_1: 15; A_4: 2, R_2: 12, A_5:2, R_3: 8, A_6: 2, R_4: 7,5; A_7: 3, R_5: 7; A_8:5 (2); A_9: 2 (1); A_{10}: 7 (5); A_{11}: 3 (1).

Mesosoma: Mesoscutum, axillae, and mesoscutellum pubescent, coriaceous (Fig. 7). Anterior border of mesoscutum in dorsal view strongly inclined, notauli complete, weakly crenulate; sulci between axillae and mesoscutellar disc roughly crenulate. Mesoscutellum transversely convex and longitudinally simple, not carinate laterally. Mesopleuron slightly coriaceous, with some bristles anteriorly, and separated ventrally from metapleuron by crenulate suture. Propodeum without armature. Metanotal sulci extending posteriorly, convergent medially; propodeal carina transverse, forming X-shaped structure, posterior propodeal area smooth.

Wings: Forewing without cells, marginal vein long and pubescent, membrane with numerous microtrichia, pterostigma well developed (as in all species of the family), 0.12 mm diameter, poststigmal veins well defined and long (Fig. 5); no other veins present, hind wing without venation.

Metasoma: Nine visible segments, integument smooth and shiny; fusiform, more convex ventrally than dorsally, ovoid in dorsal view.

Female: Unknown.

Biology. Unknown.

Comments. The number of lateral rami on the antenna, the dimensions of each flagellomere (length × width), and the form of the forewing veins serve to distinguish *D. riograndensis* sp. n. from the other species of the *halidayi* species group. *Dendrocerus sylviae* belongs to the *halidayi* group, but only the female is known, separated from the other species by the possession of longitudinal grooves on T_{III}.

Distribution. *Dendrocerus riograndensis* sp. n. is known presently only from the central region of Rio Grande do Sul, Brazil. Future surveys will be needed in order to better ascertain its total potential distribution.

Material examined. Holotype: BRAZIL. Rio Grande do Sul: Santa Cruz do Sul, (Agronomy, Development, Extension and Training Center "ADET", 29°48'22.92"S, 52°19'42.00"W, 102m), Malaise trap, Köhler A. Leg., 1♂, 16.XII.2011, (CESC 43389/17). Paratypes: Eight males with the same data as the holotype: BRAZIL. Rio Grande do Sul: Santa Cruz do Sul, (Agronomy, Development, Extension and Training Center "ADET", 29°48'22.92"S, 52°19'42.00"W, 102m), Malaise trap, Köhler A. Leg., 1♂, 16.XII.2011, (CESC 43364/20); 1♂, 20.XII.2011, (CESC 44067/11); 2♂, 27.XII.2011, (CESC 45553/14); 1♂, 03.I.2012, (CESC 46152/13); 1♂, 10.I.2012, (CESC 46511/10); 2♂, 17.I.2012, (CESC 46916/16).

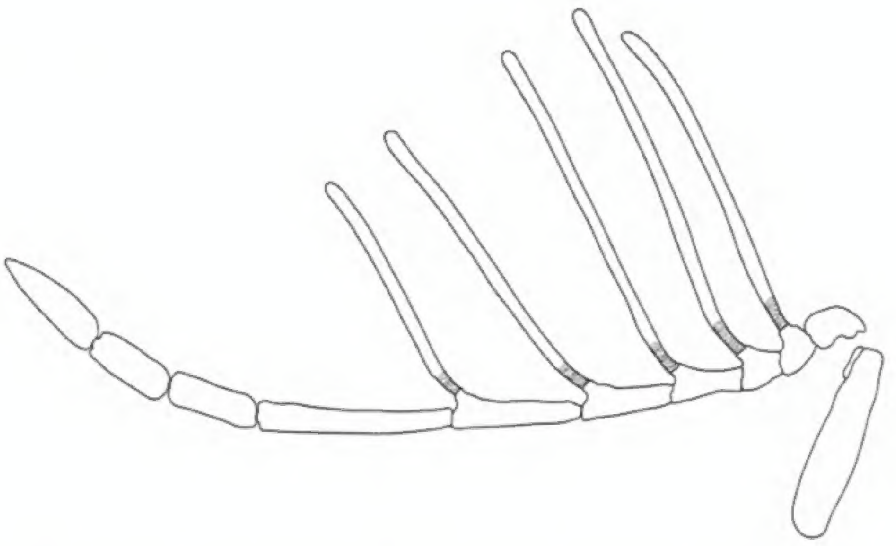

Figure 1. Detail of male antenna of *D. mexicali* (redrawn from Dessart 1991).

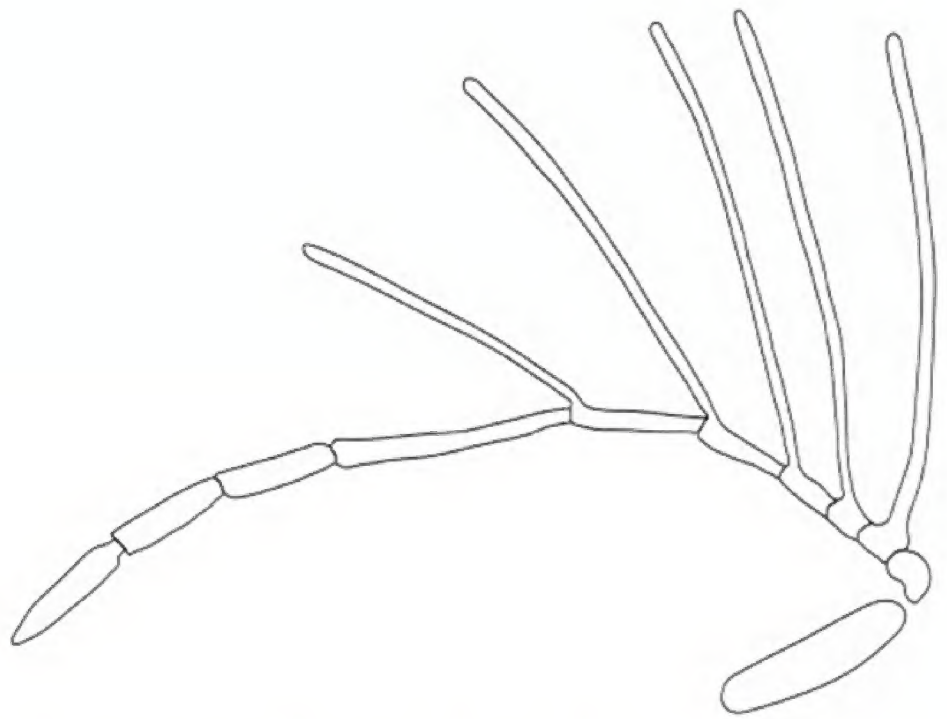

Figure 2. Detail of male antenna of *D. araucanus* (redrawn from Dessart 1991).

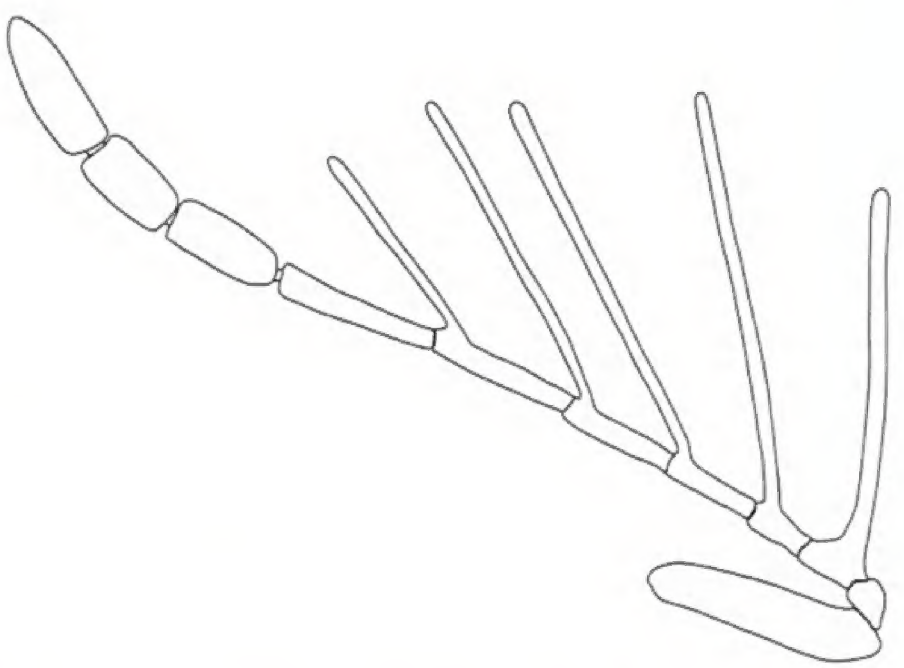

Figure 3. Detail of male antenna of *D. ranquel* (redrawn from Martinez 2003).

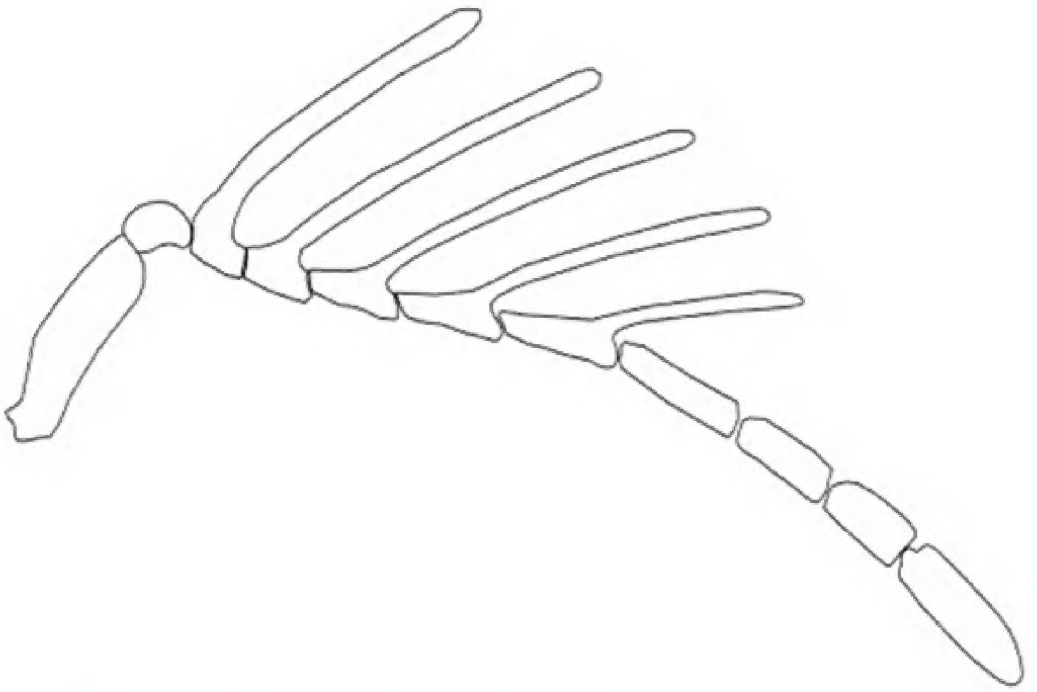

Figure 4. Detail of male antenna of *D. riograndensis* sp. n.

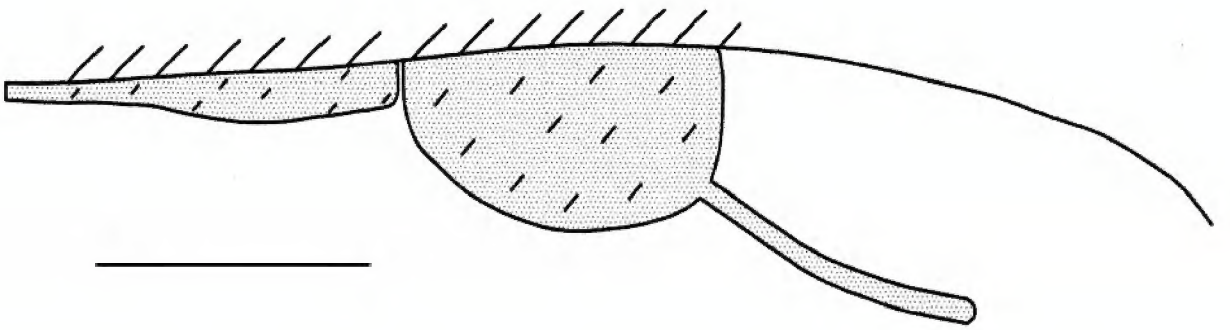

Figure 5. Detail of forewing with pterostigma, of *D. riograndensis* sp. n. Scale: 0.1 mm.

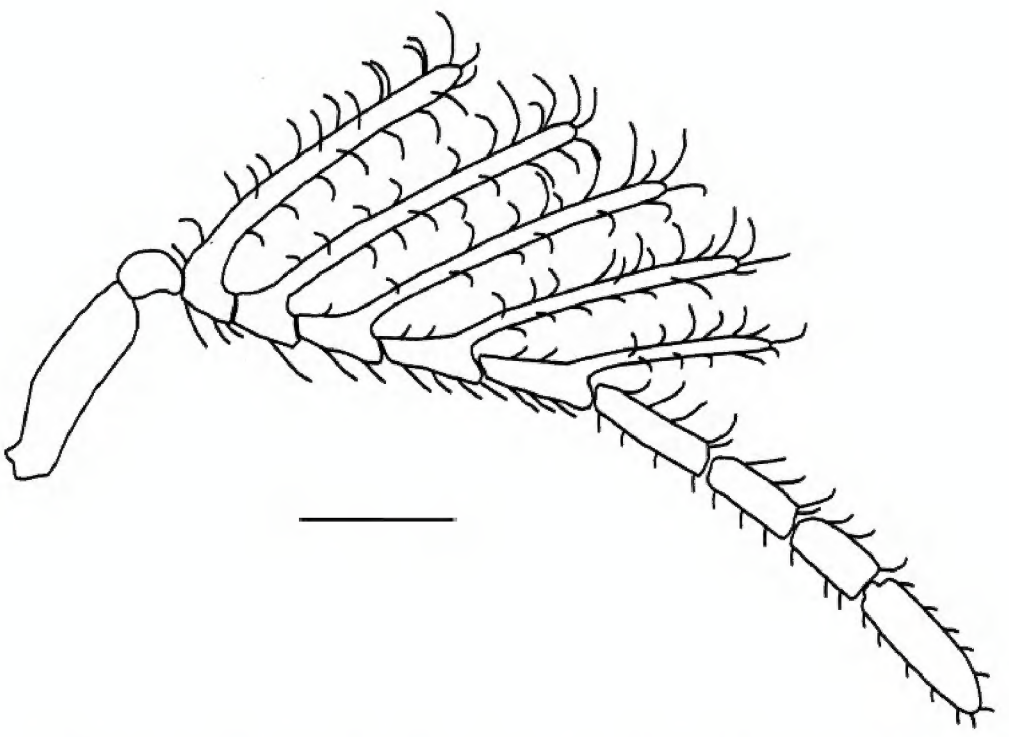

Figure 6. Detail of the antenna with coarse bristles, of *D. riograndensis* sp. n. Scale: 0.1 mm.

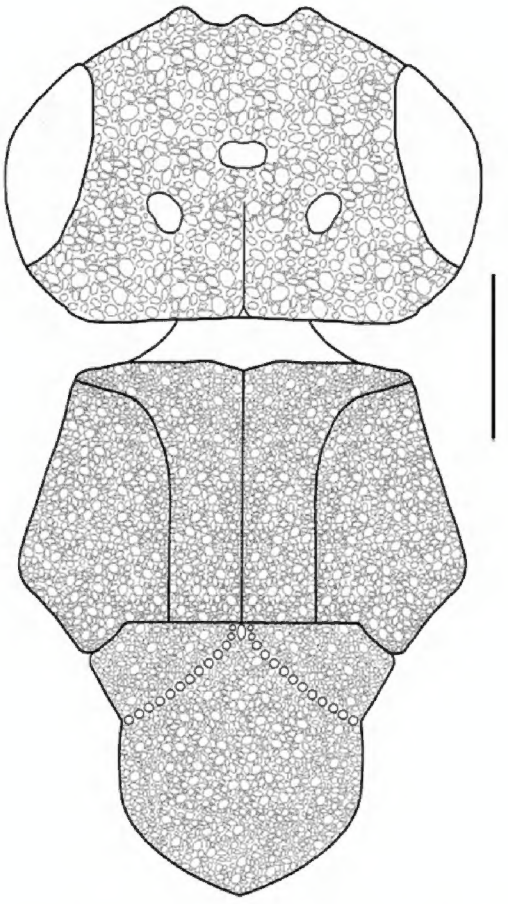

Figure 7. Head, mesoscutum, axilla, and mesoscutellum (dorsal view), of *D. riograndensis* sp. n.. Scale: 0.1 mm.

Key to males of the *halidayi* species group in the Neotropical region

1 Antenna with five unarticulated branches; T_{III} smooth, without punctures **2**
- Antenna with five articulated branches basally (Fig. 1); T_{III} with punctures ... ***D. mexicali***
2 A_8 same length as A_7; A_8 approximately same length as A_{11} **3**
- A_8 twice length of A_7; A_8 longer than A_{11} (Fig. 2) ..... ***D. araucanus***
3 Antennal branches relatively thin; A_7 and A_8 of similar width; R_1 smaller than R_2; R_5 length approximately similar to A_7 (Fig. 3) ..... ***D. ranquel***
- Antennal branches relatively thick; A_7 thinner than A_8; R_1 and R_2 of same length; R_5 much longer than A_7 (Fig. 4) ..... ***D. riograndensis* sp. n.**

Acknowledgements

We are grateful to the company JTI – Japan Tobacco International, for access to the tobacco farming site where collections were made, CNPq for financial support. In addition we are thankful to Dr. Michael S. Engel, University of Kansas Natural History Museum, USA, for taxonomic aid and a revision of the work; to Stéphanie Davister, Library of Agricultural Sciences, Université de Liège, Belgium, for sending copies of the taxonomic works of the late Paul Dessart; and to José Ricardo Assmann Lemes for assistance with translations into English.

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